

2019 Premier Cotton Indicators

(Knowledge based questions)

Cotton Premier – Disease & Nematode Management

- Importance of proper disease/nematode diagnosis
- Impact of pathogen biology and environmental interaction on disease development
- Disease/nematode management strategies and options
- Relationship between cultural practices and disease development
- Varietal Influence on cotton disease and nematodes with resistance/tolerable traits
- Crop rotational influence on disease occurrence
- How to identify nematode and specific disease symptoms
- Value and usefulness of replicated research trials at the regional, district, and county level

Cotton Premier – Insect Management

- When and under what conditions to use insecticides
- Insecticide selection based on crop growth stage and economic thresholds.
- Accurate sampling techniques for a given pest
- Accurate identification of insect pests and their damage symptoms.
- Importance of action thresholds and economics
- Identification and understanding of importance of beneficial insects
- Understanding pesticide labels
- Handling insecticide applications: correct dose, personal protection, timing, reentry interval etc.
- Insecticide resistance management: How to avoid development of resistance to insecticide?
- What kinds of weeds/plants serve as alternate hosts for cotton insects?
- Importance of weed management in controlling cotton insects.
- Pest risks for non-Bt cotton varieties.
- Value and usefulness of replicated research trials at the regional, district, and county level
- The impact of different insecticides on beneficial insects/arthropods

Cotton Premier – Economic Risk Management/Marketing

- How to identify cost of production
- Importance of knowing your cost of production in developing your price targets
- Benefits of writing a marketing plan
- How to incorporate market fundamentals in a marketing plan
- How to incorporate technical analysis in a marketing plan
- Knowledge of annual Farm Bill considerations
- Farm assistance program and how it can be utilized for cotton
- Knowledge of marketing alternatives/outlets
- Incorporating economics into in-season management decisions
- Understanding options and how they can be used in a marketing plan

Cotton Premier -- Crop Harvest Technologies and Preparations

- Why Harvest aid selection is important
- Environmental conditions that influence harvest aid performance
- Which harvest aids are potentially more profitable
- Value and limitations of harvest aid chemical use
- Non-target safety issues associated with some harvest aid chemicals
- Need for appropriate crop condition and maturity level for optimum harvest aid performance
- How to properly gauge crop maturity for optimum harvest aid performance
- Interaction of variety and cultural practices on harvesting method
- Ability to evaluate the profitability of alternative harvesting methods (picker vs. stripper)
- Variety selection, in season management and harvest aid selections for stripper harvesting
- Variety selection, in season management and harvest aid selections for picker harvesting

Cotton Premier -- Cotton Varieties (Pre-plant Considerations and Cotton Development)

- Why variety selection is important
- Why seeding rates are important
- Why seed quality is important and how to determine quality
- Which varieties yield well under various irrigation and dryland production systems
- Which varieties have good fiber quality
- Which varieties are potentially more profitable (both good yield and quality)
- Value and limitations of transgenic technologies
- The necessity of a variety's "complete package" to reduce production risk in the High Plains
- Seed Treatments
- Cotton Growth Stage and Development
- Varietal Influence on cotton disease and nematodes with resistance/tolerable traits
- Visible marking of different herbicide tolerance in fields
- Value and usefulness of replicated research trials at the regional, district, and county level

Cotton Premier – Soil Fertility

- How to properly sample both surface (for nutrients) and subsoil (for nitrate-N only)
- Potential value in taking a deep soil sample for residual nitrate-N
- Interpretation of soil test results, including critical levels of nutrients
- Value of targeting specific fields for nutrient management
- Identification of key nutrient deficiency symptoms
- Influence of soil chemistry on growth and development
- The effects of pH levels with available nutrients
- Organic Matters role in soil health
- Knowledge of soil types, their potential and limitations
- Soil and Water Conservation strategies
- Value and usefulness of replicated research trials at the regional, district, and county level

Cotton Premier – Weed Pests

- Weed resistance and management strategies for prevention
- Importance of weed identification
- Factors affecting herbicide drift and management
- Factors involved in weed management systems and herbicide selection
- Management strategies to control herbicide resistant weeds
- Proper tank cleanout procedures
- Understanding and utilizing new technologies for 2,4-D and dicamba
- Importance of tillage practices
- Value and usefulness of replicated research trials at the regional, district, and county level

Cotton Premier – Soil / Water Relationship

- Crop water requirements
 - Irrigation scheduling
 - Crop water productivity
 - Interaction of water and fertility
 - Water quality considerations
- Soil moisture management
 - Soil moisture characteristics / plant available water
 - Tillage systems and rotations
- Irrigation technologies and best management practices to improve water use efficiency
 - Terminology of irrigation systems (standard terms for clear communication)
 - Low Pressure Center Pivot Irrigation (LEPA, LESA, LPIC, MESA, PARM)
 - Micro-irrigation (including subsurface drip)
 - Surface irrigation
 - Best Management Practices (selecting and applying BMP's to improve technologies/methods)
- Irrigation efficiency and economics
 - Energy efficiency (pumping plants, system and management considerations)